REMARKS

By this amendment, claims 1-27 are pending, in which claims 1, 3-4, 7, 9-15, 17-22, and 25-26 are amended. Care was exercised to avoid the introduction of new matter, with adequate descriptive support being found throughout the specification and drawings, for example, on FIG. 1, elements 22, 30, 32, 18, and 70 and accompanying text.

The Office Action mailed July 31, 2001 rejected claims 1-4 as obvious under 35 U.S.C. § 103 based on *Mechling et al.* (US 5,873,030) in view of *Nelson et al.* (US 6,032,132) and further in view of *Doherty et al.* (US 5,333,184), claims 5-7 as obvious over *Mechling et al.*, *Nelson*, and *Doherty et al.* further in view of *Witzman et al.* (US 5,737,399), claims 8-10 as obvious over *Mechling et al.*, *Jaiswal et al.* (US 6,002,754), *Doherty et al.*, and *Witzman et al.* further in view of *Kay et al.* (US 5,575,894), claims 11-16 as obvious over *Mechling et al.*, *Jaiswal et al.*, and *Doherty et al.*, further in view of *Herbert* (US 5,333,183), claims 17-23 as obvious over *Mechling et al.*, *Nelson et al.*, and *Doherty et al.*, further in view of *Liu et al.* (US 5,898,780) and *Wang* (US 5,991,746); claims 24-26 as obvious over *Mechling et al.*, *Nelson et al.*, and *Doherty et al.*, further in view of *Jaiswal et al.*, and claim 27 as obvious over *Mechling et al.*, *Nelson et al.*, *Doherty et al.*, *Liu et al.* and *Wang* further in view of *Witzman*.

Despite the apparent complexity of the rejection, the Office Action basically boils down to using *Mechling et al.* for disclosure of collecting billing records, *Nelson et al.* or *Jaiswal et al.* for disclosure of converting billing records, and the remaining references for various details. This rejection is respectfully traversed because the references, singly or in combination, fail to teach the limitations of the claims.

For example, all claims, as amended, require a computing device, gateway, or signaling gate for "interfacing the signaling network with an Internet Service Provider" as well as being "operative to collect call billing data from the signaling network in a first data structure format."

Provision of the gateway with the recited functions advantageously addresses problems in conventional Internet Service Provider (ISP) billing solutions that require expensive switch features, considerable floor space, or heavy expenditures (See specification, pp.1-2).

None of the cited references, however, teach or otherwise suggest this feature. In fact, *Mechling et al.*, *Nelson et al.*, *Witzman et al.*, *Jaiswal et al.*, *Kay et al.*, *Herbert*, and *Wang* are completely silent about Internet Service Providers in the first place. Therefore, these references are unaware of both the problem and the solution. *Liu et al.* is the only cited reference to even mention an Internet Service Provider, but *Liu et al.* teaches against this feature. Specifically, *Liu et al.* discloses a home internet service provider **64** that includes a billing module **69** protected by a firewall **70**. *Liu et al.* not only fails to disclose that the billing module **69** collects billing records from a signaling network, but *Liu et al.*'s isolation of the billing module **69** behind a firewall **70** would teach against putting the billing module on a gateway or other device interfacing the Internet Service Provider and the signaling network.

The Office Action's citation of *Mechling et al.* for a gateway does not support the rejection. Specifically, the Office Action contended that the "NMSP as a gateway," but *Mechling et al.* fails to disclose that the NMSP interfaces a signaling network with an Internet Service Provider as required by the amended claims.

Dependent claims 2-9, 11-16, 18-21, and 23-27 are allowable for at least the same reasons as their corresponding independent claims and are individually patentable on their own merits. For example, there is no motivation but impermissible hindsight to cobble together six diverse references, picking and choosing arbitrary elements to meet the recited claims.

Therefore, the present application, as amended, overcomes the rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved

issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at 703-425-8516 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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APPENDIX

1. (Twice Amended) An apparatus for managing call billing records for [communications network] users of a signaling network operative to carry user calls, comprising:

[a communications network operative to carry user calls;]

a gateway [communicating with] interfacing the signaling network with an Internet Service Provider and operative to collect call billing data from the signaling network in a first data structure format;

[a communication link coupled to the gateway;] and

a network processor [communicating with the gateway via the communication link and with a data network and] operative to:

receive the collected call billing data in the first data structure format from the gateway,

convert the collected call billing data from the first data structure format to a second data structure format, and

transmit the call billing data in the second data structure format to [the] a data network for billing processing.

3. (Once Amended) The apparatus of claim 1 wherein the network processor comprises an interface that mates with [the] a communication link coupled to the gateway.

4. (Once Amended) The apparatus of claim 1 wherein the network processor [polls] is further operative to poll the gateway to collect the collected call billing data in the first data structure format.

7. (Once Amended) The apparatus of claim 1 wherein the data network is configured to periodically receive the call billing data in the second data structure format for billing processing.

9. (Once Amended) The apparatus of claim 1 wherein the network [process] processor comprises a network platform.

10. (Twice Amended) [An apparatus] A system for managing call billing records for users of a [communications] signaling network, comprising:

a signaling network having communications capabilities to carry user calls;

a signaling gateway [communicating with] interfacing the signaling network with an Internet Service Provider and operative to collect call billing data resulting from the calls in a first data structure format;

a communication link coupled to the signaling gateway; and

a network processor communicating with the signaling gateway via the communication link and with a data network and operative to:

convert the collected call billing data from the first data structure format to a second data structure format conducive to conducting billing processing and

transmit the call billing data in the second data structure format to the data network for billing processing.

11. (Once Amended) The [apparatus] system of claim 10 wherein the data network is operative to periodically receive the call billing data in the second data structure format for billing processing.

12. (Once Amended) The [apparatus] system of claim 10 wherein the network processor [polls] is operative to poll the gateway to collect the collected call billing data in the first data structure format.

13. (Once Amended) The [apparatus] system of claim 12 wherein the network processor [polls] is operative to poll the gateway at preset intervals.

14. (Twice Amended) The [apparatus] system of claim 10 wherein the data network is configured to receive the call billing data in the second data structure format for billing processing.

15. (Once Amended) The [apparatus] system of claim 14 wherein the data network comprises a local traffic system (LTS), and wherein the received call billing data in the second data structure format comprises an industry standard automatic message account (AMA) structure code 625 format that is used to implement billing processing.

17. (Twice Amended) A method of managing call billing records of users of a [communications] signaling network operative to carry user calls, comprising:

[providing a first computer device, a second computer device, and a communication link, the first computer device communicating with the network and the second computer device communicating with the first computer device via the communication link and with a data network;]

collecting call billing data with the first computer device in a first data structure format at a first computer device, said first computer device interfacing the signaling network and an Internet Service Provider;

transferring the call billing data [using a data communications protocol] from the first computer device to [the] a second computer device;

converting the call billing data [with] at the second computer device from the first data structure format to a second data structure format; and

transmitting the call billing data in the second data structure format to [the] a data network for billing processing.

18. (Once Amended) The method of claim 17 wherein the first computing device [is] includes a signaling gateway.

19. (Once Amended) The method of claim 17 wherein the second computer device [is] includes a network processor.

20. (Once Amended) The method of claim 17 wherein the [data communications protocol comprises] step of transferring includes transferring the call billing data in accordance with a file transfer protocol.

21. (Once Amended) The method of claim 17 [further comprising] wherein the step of transferring includes transferring the call billing data over a communication link provided between the first computer device and the second computer device.

22. (Twice Amended) A method of managing call billing records generated from usage within a [communications] signaling network by users, comprising:

[providing a signaling gateway communicating with the network and a network processor communicating with the signaling gateway and with a data network;]

collecting call billing data with [the] a signaling gateway [ice] in a first data structure format, said signaling gateway interfacing the signaling network and an Internet Service Provider;

transferring the call billing data [using a data communications protocol] from [a] the signaling gateway to [the] a network processor;

converting the call billing data with the network processor from the first data structure format to a second data structure format conducive to processing billing information; and

transmitting the call billing data in the second data structure format to [the] a data network for billing processing.

25. (Once Amended) The method of claim 22 wherein [the data communications protocol comprises] the step of transferring includes transferring the call billing data using a file transfer protocol.

26. (Once Amended) The method of claim 22 wherein the step of transferring includes transferring the call billing data via a communication link [is provided] between the signaling gateway and the network processor.